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# SPECIFY SHEVLIN PINE



*"Since 1690 a Home of Distinction"*

Shevlin, Carpenter & Clarke Co.

Minneapolis, Minnesota

Shevlin Pine Lumber Data

A. I. A. File Number 19a

100





# SPECIFY SHEVLIN PINE

Characteristics, Physical Properties, Uses  
and Place in Building Construction for

Shevlin California Sugar Pine

Shevlin California White Pine

Shevlin Northern White Pine

Shevlin Ponderosa Pine

Shevlin Norway Pine



Shevlin, Carpenter & Clarke Company  
900 First National-Soo Line Bldg., Minneapolis, Minn.





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Newton L. Carpenter & Charles E. Co.  
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### Estimating

FROM the very beginning when cruisers estimate the timber, Shevlin Pine is a matter of selection and elimination. Years ago the Shevlin interests sent cruisers through the best stands and selected only the finest sections. Today every board of Shevlin Pine shipped from our mills gives you the advantage of this wise selection.



## The Ideal American Home

WHEN we picture a dwelling that means home in every American sense of the word, we see a frame house nestling in nature's beauty. A home-like charm is the first characteristic of the frame house. Houses of wood seem to symbolize the word "Home." Other materials may do for mansions and palaces, but for the popular home we need wood.

Since early Colonial days the frame home has been the true American type. Most of the older homes in America, those over two hundred years old, are built of lumber. After centuries of continuous usefulness these homes are standing today as convincing demonstrations of the long life of homes built of wood. Today it is estimated that not less than 70,000,000 of the American people live in frame homes.

### *Frame Construction is Adaptable*

No other building material lends itself as readily to differing architectural forms and to satisfactory planning. Whatever the hazy shape of the dream home, the architect and builder can fashion it of lumber and mould it so that it is in harmony with the surroundings.

And there is nothing to compare with lumber when it comes to adding the charm of color to the delight of form.

### *Frame Homes are Comfortable*

American homes must be healthful and comfortable. The frame home is hygienic and sanitary, the house of light and air. Walls built of lumber are dry and comfortable. They do not have the feeling of dampness.

It is said that after the early colonists

passed the log cabin period they tried building homes in the English half-timber style, with the frames of bulky timbers and the spaces filled in with clay, mortar, stones and other pugging. One New England winter was enough. The next summer the walls of such houses were covered with clapboards and no more half-timber houses were built by the colonists.

The climatic extremes of this country require walls and floors that resist cold and heat. Lumber is a natural non-conductor of heat. It is the original insulation material.

In winter, frame homes are easy to heat because lumber keeps in the heated air. In summer, lumber keeps the home cool by shutting out the sun's heat. Various tests have shown that homes built of lumber require less fuel than other types. Frame homes stood out in the tests of the Technical University of Norway and of the Engineering College of the University of Saskatchewan, at Saskatoon, Canada. In a frame home, special insulation material merely supplements the inherent quality of the wood.

### *Frame Houses are Low in Cost*

Frame homes are lower in original cost than any other construction. Brick veneer, stucco and masonry construction usually run from ten to forty per cent higher than lumber. The difference varies with the type of building under consideration but homes of wood are always lower in cost.

The frame home may require more upkeep than does one of brick, stone or concrete but the difference, which is not great, is more than offset by the lower cost of heating a frame home because of the superior insulating



qualities of lumber. The principal maintenance cost is exterior painting. Practically all forms of home construction have trim that requires painting and the chief factor in the cost of painting is the labor time spent in erecting scaffolds, putting up ladders and in applying the paint to the trim of windows, doors, porches and gutters. The cost of painting the complete frame home is but little more than that of painting the trim of other types of construction.

No other building material is so suited to the decorative use of paint as lumber. The owner of a frame home can have a new exterior whenever he desires.

Alterations, additions and repairs are also easily and cheaply accomplished with a frame home. It is possible to make an architectural unit of a frame home and have it enlarged as the family and income grow without impairing the symmetry of the architectural plan.

### *No House is Indestructible*

No dwelling in which a family can live comfortably has yet been found which is indestructible. Concrete and stone disintegrate. Steel frames warp and collapse. Fire will ruin any type of house. About ninety-six per cent of all fires are said to originate inside. The well-built frame house is practically as fire-resistant as any other type of construction as far as internal fires are concerned.

Statistics indicate that fewer fires occur in frame homes in proportion than in other construction. In 1925 frame buildings represented ninety-six per cent of all buildings in Los Angeles, yet only seventy-eight per cent of the fires occurred in frame structures. Pasadena, with eighty per cent of all buildings made of wood, had only seventy-two per cent of its fires in frame buildings. Frame structures constituted ninety-six per cent of the buildings in San Jose, but only sixty-two per

cent of the fires were in this type of construction.

In thirteen of the principal cities of Massachusetts, including Boston, in 1921, masonry walled buildings had 5.14 fires per hundred buildings while frame structures had only 1.71 per hundred. Over the three-year period, 1921, 1922, 1923, the records show that in these cities fires occurred 2.8 times as often in masonry buildings as in those of frame construction.

### *Withstands High Winds*

Properly built frame homes showed their ability to withstand high velocity winds during the 130-mile an hour hurricane at Miami, Florida, in 1926 when concrete, tile and stucco homes went down all around them. Instances are recorded where whole neighborhoods fled to homes built of lumber for protection after their own dwellings of other materials were no longer safe. Well designed lumber construction withstood the storm wave better than other types.

### *The Proven Home*

The original homes of this nation were of wood and through all the centuries this type has stood all the tests of time and the elements. Even today, with all the varied building materials available, most of us live in frame homes. The inherent love of wood has been supported by the practical proof of more years of home comfort per dollar of expenditure.

Sometimes we seem to forget how indispensable wood is. We take wood for granted and are apt to think that something else is better because it is new and different. But time and the elements always again prove lumber to be the best building material.

In this changing world it is well to hold fast to the tried and true things that have come down to us from the past. One of the most important is the ideal American home—built of lumber.





## ❧ "Timber!" ❧

**A**S each giant of the forest begins to totter, the steady zing of the saw ceases and the axman calls the warning, "Timber!" ❧ This is the signal to look up, gauge the direction the giant will take and step to a position of safety. ❧ The cry of "Timber!" means another thing also. It is the signal that one more carefully selected Pine has passed the first test of quality and started on its long journey to supply your need for Shevlin Pine.



## America's Greatest Resource

FROM the beginning, wood has been America's greatest resource. In the many varieties available at small expense, this nation has a birthright no other nation enjoys.

Few people realize the extent to which the trees have been responsible and are still responsible for the greatness and richness of this country of ours.

The huge forests spreading over almost the entire face of the North American continent at first seemed to overwhelm the early settlers. Then they began to comprehend that in these very trees nature had given them a raw material with which they might build a nation.

You can scarcely turn a page in the early chapters of American history without seeing a picture of wood in one or more of its many forms. Wood built the stockades for refuge against hostile Indians. Wood, in the form of corn cribs and barns, protected their crops and livestock. Within the stout walls of their log cabins, the colonists reclined in wooden chairs, slept in wooden beds and ate with wooden forks and spoons.

Despite the fact that other materials are now being used as well as wood to take the place of certain articles of the colonists' simple requirements, the uses for wood are constantly increasing. At the beginning of the nineteenth century, there were 2,600 recorded commercial and industrial uses for wood, while within the first quarter of the twentieth century the number had increased to 4,500.

The radio alone uses more lumber in a year than goes into all of the homes in some of our smaller states. From tooth-picks to telephone poles, from the staunch timbers in our mine

shafts to the buoyant strength of Lindbergh's plane, America has used wood in her constant progress of conquest in countless and ever increasing ways.

And there is always a profit awaiting the man who will find a new use for this constantly replenished American resource.

Wood is stronger pound for pound than any other material. It is easily and cheaply fitted to special forms for special needs. Anyone who can drive a nail, handle a saw or turn a screw, can work with wood.

Wood assures its user economy. It is the least expensive both in original cost and in the relative amount of labor required for its construction.

From the standpoint of their uses, woods naturally divide themselves into two classes—hardwoods for furniture and soft woods for building.

The principal commercial American hardwood trees are Ash, Beech, Basswood, Birch, Chestnut, Elm, Red Gum, Hickory, Maple, Oak, Walnut and Poplar.

The chief softwoods are the Pines, especially White Pine, Sugar Pine, Norway Pine, Ponderosa Pine, California White Pine and Southern Yellow Pine; Cypress, Redwood, Spruce, Fir, Hemlock, Larch and Cedar.

### *Pine, the Building Material*

The softwoods are the building woods of the nation. Nature endowed Pine with the qualities that make it the ideal material for building American homes.

Pine has housed the nation for centuries past and there is a sufficient supply for centuries ahead.





### ❧ The Drive is On ❧

**D**OWN the swift current come the Shevlin logs. Like so many sheep they are herded from the rear by the happy, powerful lumber jacks. Only instead of the shepherd's crook, the jack uses a stout grappling hook. His duty is to keep the herd constantly moving in a steady procession to the mill. ❧ This is one more step in the process of bringing Pine of Shevlin quality to your door.





## There is No Substitute for Pine

SINCE Colonial days, Pine has proven its worth as the nation's building material.

Pine is light in weight but strong enough to withstand stress. It is easy to work, holds nails tight and "stays put." It has an attractive appearance and is responsive to any finish. There is no part of any ordinary building where wood is called for that Pine cannot be used to advantage.

The claims of lumber substitutes are fascinating but time and the elements soon reveal the true character of every building material and show again and again that there is no substitute for Pine.

### *Pine Construction Economical*

Pine construction is low in original cost and in the long run gives more years of home comfort for each dollar expended. It enables the man of moderate means to build well.

It also gives economy by offering different grades to fit different building needs. The select grades can be used where appearance is important and the lower grades where the appearance requirements are not so exacting but where permanence and strength are still desired.

### *Plentiful Supply of Pine*

There is no reason why Pine, the tested building material of our ancestors, cannot fill the needs of our descendants as there is a sufficient supply for many generations.

The original forest area of the United States is estimated to have covered 822,000,000 acres. The present forest area is put at 550,000,000 of which 477,000,000 acres are, after centuries of use, available for commercial purposes.

Eighty per cent of this is estimated to be

softwoods and a large part of the softwood timber is Pine. The Pacific states are the present stronghold of the softwoods, especially of Pine. In 1923 this region was the principal lumber producing area. Oregon, Washington and California are said to hold over half of the standing commercial saw timber of the nation and to supply nearly one-third of the consumption. This region has the largest trees and the heaviest stands in America, if not in the world, and new growth there is unusually rapid.

### *Timber Should Be Used*

The timber crop is similar to any other crop. When it ripens, it should be harvested and utilized. Otherwise it deteriorates and is subject to natural destruction, such as fires, which in some instances have made cleaner sweeps than the axe has ever made. Conservation of the mature timber crop is false economy. It should be cut and used.

Industrial cutting does not result in permanent deforestation. Nature is always producing. New timber growth is estimated to equal two-fifths of the consumption. Reforestation will increase this growth.

The effective way to interest private enterprise in reforestation is to make lumbering profitable today—to use wood. A good demand for the present mature timber will mean a great crop of new timber for our descendants.

No one need hesitate to use wood. It is more logical to hesitate to use minerals because mineral deposits are non-renewable. Wood should be used where it is manifestly best and there is no substitute for Pine as home building material when long life, attractive appearance and ease of working is desired.





*The Boom is In*

**T**HE Boom is in! The logs have reached the mill at last. It is an impressive sight to see a river full of logs waiting to be changed into lumber. ☞ If they are Shevlin Pine they have been carefully selected and will meet further selection and elimination at each step of the "milling." ☞ Shevlin Pine is the wood that endures. Be certain to specify it if you wish the best the industry can deliver.





## *Shevlin Pine is the Ideal Building Material*

**Y**EARS AGO Shevlin cruisers covered the timber districts of the continent and chose the best available stands. Their painstaking selection is shown today in the annual crops of Shevlin Pine.

The timber to be cut is carefully chosen so that only the mature trees are taken. Modern milling equipment changes them into quality lumber. Each part is utilized for the purpose for which it is best suited.

Batteries of dry kilns and ideal air drying conditions thoroughly season each piece of Shevlin Pine by modern methods so that it will perform its part in the home. Rigid grading at each step of the milling makes certain that Shevlin Pine is properly classified.

### *Shevlin Pine Endures*

Shevlin Pine is the ideal building material. There is no guesswork about a home properly constructed of this wood. Behind Shevlin Pine stands centuries of proved endurance.

### *Shevlin Pine is Easy to Work*

Shevlin Pine is easy to work. It saves time and labor. It fashions under tools with a willingness that produces accurate joinery. It cuts or saws quickly with or against the grain without splintering. The fine texture and even grain is easily moulded into sharp, clean contours.

Nails feel at home in the close fibre and fine texture of Shevlin Pine. They readily penetrate this wood, even at the edge, without splitting it.

### *Shevlin Pine "Stays Put"*

Shevlin Pine keeps precise work accurate by "staying put." It is practically free from warping, shrinking or twisting. Woodwork of Shevlin Pine retains its shape.

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Shevlin Pine framing keeps floors level, roofs sound and the plaster whole. On the home exterior, the joints remain tight and the weather remains outside.

### *Shevlin Pine Holds Paint*

Through thick and thin, battering storms and blistering suns, paint "sticketh closer than a brother" to Shevlin Pine. They are partners in giving long years of attractive appearance to home exteriors and interiors.

Freedom from pitch and resin, the even texture and smooth surface, all help to produce a satiny finish with any treatment.

### *Shevlin Pine Withstands Stress*

Shevlin Pine combines light weight with sufficient strength to serve any ordinary structural purpose. It withstands structural stress and the strains of severe wind pressure.

### *"Nature's Own" Insulation*

The large number of small air filled cells, regularly spaced and of uniform shape, make Shevlin Pine unusually non-conductive to heat. These cells are comparatively free from resin or pitch and form dead air spaces that retard the transmission of heat and sound. Walls paneled with Shevlin Pine have remarkable sound deadening qualities.

### *Sufficient Supply for Decades*

The Shevlin interests have timber holdings in the better Pine districts of the continent to supply Shevlin Quality Pine for decades ahead at reasonable prices.

Shevlin Pine is as good in natural qualities as any lumber ever available and is better in the quality added by manufacturing. Modern methods of milling, seasoning and grading make Shevlin Pine superior to the lumber used in colonial times. It is the ideal building material.





### ❧ From Logs to Lumber ❧

**H**ERE in the sawmill every step of changing the giant logs into the best lumber is performed with decision, accuracy and speed. Only an expert sawyer can get the best lumber out of a log. Shevlin sawyers are masters of their craft—another reason why Shevlin Pine meets the most rigid building requirements.



## The Five Shevlin Pines

THESE are five varieties of Shevlin Pine: Shevlin Northern White Pine, Shevlin California Sugar Pine, Shevlin California White Pine, Shevlin Ponderosa Pine and Shevlin Norway Pine.

Each variety is obtained from the better stands in the districts where nature planted the species. When it reaches you, it is thoroughly seasoned, rigidly graded and smoothly milled.

Shevlin Northern White Pine and Shevlin Norway Pine are obtained from stands in

Ontario, Canada. They are milled at two plants in Ontario, The Shevlin, Clarke Company, Ltd. at Fort Frances and the Carpenter-Hixon Company, Ltd., at Blind River.

Shevlin California Sugar Pine and Shevlin California White Pine come from the upper California region and are milled by the McCloud River Lumber Company at McCloud, California.

Shevlin Ponderosa Pine is cut in the Deschutes region of Oregon and milled at Bend, Oregon, by The Shevlin-Hixon Company.

### Shevlin Northern White Pine

Shevlin Northern White Pine (*Pinus Strobus*) is identically the same species used in the early colonial homes. This species is sometimes called Eastern White Pine, Cork Pine and Pumpkin Pine. It is the original genuine White Pine.

The species is found in the Northeastern States, Lake States and parts of Canada. It is a slow growing tree with a minimum of sap wood and a maximum of heart wood. The trees are large and yield a high percentage of clear stock free from defects.

#### A Highly Prized Wood

Shevlin Northern White Pine is highly prized for millwork, pattern work and the most delicate of wood carving. The soft texture and fine grain work rapidly under tools,

producing close-fitting and accurate joinery.

Northern White Pine shrinks less than any other structural wood. It seldom cracks, warps or swells. Once in place it forever stays put.

Probably the least resinous of all Pines, it takes paint or enamel finish perfectly, absorbing and holding the protective coat longer than other woods.

#### Recommended for Outside Use

Shevlin Northern White Pine has a remarkable ability to stand exposure out-of-doors through varying weather. While the ideal wood for all home construction work, it is especially recommended for all outside uses, including sash, doors, frames, porch work, outside trim and siding.

### Shevlin California Sugar Pine

Shevlin California Sugar Pine (*Pinus Lambertiana*) is botanically and physically a true White Pine. It has five slender needles in each cluster, the longitudinal cells are

uniform in size and the radial cells have smooth walls. According to the United States Forest Products Laboratory, there is no positive means of distinguishing, micro-





## ❧ *Stacking the Lumber* ❧

T

 ODAY lumber is piled in Shevlin mill yards by electric stacking machines. The old methods which relied upon men and horses have been abandoned. ¶ Time must be saved in every operation to keep Shevlin mills at capacity production. ¶ Shevlin Quality Pine gives such satisfaction that every effort is needed to meet the demand,



scopically, between Sugar Pine and the White Pines of the east.

In physical properties Sugar Pine is almost identical. In specific gravity it comes within 3/1,000; in volumetric shrinkage from green to oven-dry within 1/2 of 1%; in softness, as determined by compounding properties, it is within 7%; and in strength within 2%.

### *Large Amount of Heartwood*

The Sugar Pine of California and southern Oregon is a monarch among trees, the largest of the Pine family. The sap ring being very narrow, there is an exceptionally large amount of heartwood. It yields a large percentage of clear cuttings in a wide range of width, length and thickness.

Sugar Pine is comparatively new in use but many structures attest its durability. "Mammoth Trees" Hotel built in 1853 at Calaveras Grove, California, is an example. Its Sugar Pine roof and sides are as sound as the day they were put up.

Sugar Pine ranks among those woods showing the least tendency to shrink, swell or warp. It is light in weight and color, soft-textured, and straight-grained. It is easily worked. It grips nails tightly and readily takes and tenaciously holds paint and other finishes.

Like Northern White Pine, it is especially valuable in those parts of the home that are exposed to the weather. It is also recommended for use in interior finish and stair-work. During recent years, Sugar Pine has been used for pattern lumber more than any other wood.

### *Plentiful Supply*

There is estimated to be over thirty-two billion feet of virgin Sugar Pine timber. The annual production approximates three hundred million board feet. With present reproduction and reforestation there is every assurance of an ample supply for two centuries, probably forever.

## *Shevlin Ponderosa Pine*

Shevlin Ponderosa Pine (*Pinus Ponderosa*) is growing in favor for home construction. The general species is found from the Pacific Northwest to Arizona and New Mexico. The name "Ponderosa Pine" was adopted by the Inland Empire Mills to eliminate the confusion of the numerous names used in the past, such as Western White Pine, Western Soft Pine, and Oregon White Pine.

Some governmental agencies classify it as Western Yellow Pine because the needles, bark and cones are of the Yellow Pine type. However its wood, which is the important part in building, differs greatly from the Southern Yellow Pines and resembles the White or Soft Pine group.

### *Wood is Similar to White Pine*

The wood is comparatively soft, even-textured, close-grained and light-colored. It is easily worked, takes nails readily and holds

them firmly. Light in weight, it is sufficiently strong to withstand stress. Though having a trifle more pitch than Shevlin Northern White Pine, it forms an excellent base for paint and enamels. It is grouped with those woods showing a low tendency to shrink, warp or swell.

Being new in use, Ponderosa Pine cannot yet show centuries of service as can the "five needle" White Pines. The Inland Empire however contains some interesting examples. Gold miners constructed houses of Ponderosa Pine in the Boise Basin of Southern Idaho between 1863 and 1865. Despite the climatic extremes of this region, the wood is as sound as the day it was installed sixty years ago.

### *Used Throughout the Home*

Ponderosa Pine is used for practically the same purposes in the home as White Pine—for interior and exterior trim, siding, built-in-





### Shevlin Dry Kilns

THE Shevlin battery of kilns at McCloud, California, has a daily output of a quarter million feet—one of the largest batteries in the world. Each piece of Shevlin Pine must be thoroughly dried and carefully seasoned before it meets the Shevlin standard of quality. That is why you can rely upon Shevlin Pine for endurance and unusual satisfaction.



woodwork, doors and sash, frames, sheathing and framework.

Virgin Ponderosa Pine stands of the Inland Empire approximate 250 billion feet of lumber

with a yearly growth of about one-half billion. The present yearly cut is around two billion feet. Thus a supply of Ponderosa Pine seems assured for centuries of use.

## *Shevlin California White Pine*

Shevlin California White Pine (*Pinus Ponderosa*) is botanically the same species as Ponderosa Pine with the same characteristics and physical properties.

The species attains a large and fine growth in California and the Klamath Falls district of Oregon, reaching an average height of from 125 to 175 feet. The trunk is clear for forty to fifty feet and the trees yield a large percentage of clear cuttings.

### *Closely Resembles White Pine*

Like Ponderosa Pine, the physical properties of the wood closely align California White Pine with the botanical White Pines. The adaptability and extensive use of these Pines for many of the same purposes for which the White Pines of the east are used, is due to the soft texture, the close, uniform grain, the light weight, the light color, the smooth surface and the comparative freedom from shrinking, warping and swelling.

The wood is very workable, has excellent painting and nailing qualities and good durability. It meets high standards for home building lumber and today is extensively used in every section of the country for framing, sheathing, doors and sash, window and door frames, siding, exterior trim and interior trim of all kinds.

Some of the miners' shacks built of California White Pine about seventy years ago were never painted but they still shed water as effectively as when first built.

### *Sufficient Supply for Centuries*

The region covered by the members of the California White & Sugar Pine Manufacturers Association contains approximately 105 billion feet of California White Pine. The annual production is about one billion feet. With new growth adding approximately 250 million feet and with reforestation areas increasing, a continuous supply seems certain.

## *Shevlin Norway Pine*

Shevlin Norway Pine (*Pinus Resinosa*) is of the general species also called Red Pine, Hard Pine and Canadian Red Pine. The trees grow to considerable size and are of comparatively quick growth.

The species is rather widely distributed over the northern parts of the continent but especially in the Lake States and in Canada. It occurs chiefly in clumps among other trees. Though botanically a Yellow Pine it is largely marketed with White Pine.

### *Recommended for Framing*

Compared to White Pine, Norway Pine is somewhat coarser in grain, harder in texture

and contains more resin. The annual rings are more strongly marked. It shows greater strength in static bending and impact bending tests and for this reason is recommended for framing purposes in the home.

While shrinking more than the White Pines, it compares favorably with other native woods in shrinking, warping and swelling tendencies.

The annual production of this species is relatively small. In construction work it is used for purposes similar to the other structural Pines but especially where additional strength is desired as for the framework.





## ❧ *Dressing Shevlin Pine* ❧

**I**N the planing mills trained workmen with modern machines put the final quality touches on Shevlin Pine. ¶ Many months have passed since the timber for this lumber was selected in the woods and transported to a Shevlin mill. ¶ Yet all through the journey it has met with tests of selection which alone can produce Pine of Shevlin quality. ¶ To be certain of such quality always specify Shevlin Pine.



## Mechanical Properties of Shevlin Pines

MECHANICAL PROPERTY	GREEN CONDITION				AIR DRY CONDITION			
	(PINUS STROBUS) NORTHERN WHITE PINE	(PINUS LAMBERTIANA) CALIFORNIA SUGAR PINE	(PINUS PONDEROSA) PONDOSA AND CALIFORNIA WHITE PINE	(PINUS RESINOSA) NORWAY PINE	(PINUS STROBUS) NORTHERN WHITE PINE	(PINUS LAMBERTIANA) CALIFORNIA SUGAR PINE	(PINUS PONDEROSA) PONDOSA AND CALIFORNIA WHITE PINE	(PINUS RESINOSA) NORWAY PINE
Moisture Content (per cent)	74	123	95	54	9.9	11.4	10.8	12.5
Specific Gravity oven dry based on—	Volume when green	.36	.36	.38	.44			
	Volume when oven-dry	.39	.39	.42	.51			
	Volume when air-dry					.39	.37	.41
Weight per cubic foot (pounds)	39	50	46	42	27	26	28	34
Shrinkage from green to oven dry condition	In volume (per cent)	7.8	8.4	10.0	11.5			
	Radial (per cent)	2.2	2.9	3.9	4.6			
	Tangential (per cent)	5.9	5.6	6.4	7.2			
Static Bending Tests (pounds per square inch)	Fiber Stress at elastic limit	3400	3300	3100	3700	7000	6400	6900
	Modulus of Rupture	5300	5300	5200	6400	9600	8600	9800
	Modulus of Elasticity	1070M	970M	1010M	1380M	1420M	1210M	1340M
Impact Bending (pound per square inch)	Fiber Stress at elastic limit	6500	6700	6700	7500	9300	10,100	10,000
Compression parallel to grain (pounds per square inch)	Fiber Stress at elastic limit	2370	2340	2080	2470	5070	4740	4490
	Maximum Crushing Strength	2720	2600	2460	3080	6360	5190	5990
Compression perpendicular to grain (pounds per square inch)	Fiber Stress at elastic limit	310	350	340	360	760	640	760
Shearing Strength parallel to grain (pounds per square inch)		640	710	680	780	1070	1080	1160
Tension perpendicular to grain (pounds per square inch)		260	270	280	190	340	350	410
Hardness (load required to embed 0.444-inch ball to 1/4 its diameter)	End (pounds)	300	330	310	360	610	650	570
	Side (pounds)	300	320	320	340	470	460	460

From Bulletin No. 546, U. S. Department of Agriculture, "Mechanical Properties of Woods Grown in the United States" by J. A. Newlin and T. R. C. Wilson, Forest Products Laboratory, Madison, Wisconsin.

## Allowable Stresses in Small Homes

SPECIES	GRADES	ALLOWABLE BENDING STRESS (POUNDS PER SQUARE INCH)		ALLOWABLE STRESS IN COMPRESSION (POUNDS PER SQUARE INCH)		MODULUS OF ELASTICITY (POUNDS PER SQUARE INCH)
		IN EXTREME FIBER	HORIZONTAL SHEAR	PARALLEL TO GRAIN SHORT COLUMNS	PERPENDICULAR TO GRAIN	
Northern White Pine, California Sugar Pine, California White Pine, Ponderosa Pine	1	900	85	750	250	1000M
	2	600	57	500	250	
Norway Pine	1	1100	85	800	300	1200M
	2	733	57	533	300	

From "Recommended Minimum Requirements for Small Dwelling Construction," published by Bureau of Standards. This data furnished by the Forest Products Laboratory, Department of Agriculture. The report classifies Eastern White Pine, Western White Pine and Western Yellow Pine in the one group and Norway Pine by itself. The grades used are those in the original report, which further states that "Grade 1 shall have the defects limited for select structural grades. Grade 2 may have defects double the size or defects which have double the effect of those allowed in Grade 1."





### ❧ *Shevlin Pine on the Job* ❧

**W**HEN Shevlin Pine reaches the construction job, each piece is ready to do its part in building homes that withstand the elements. ❧ Light in weight and easy to handle, yet it has sufficient strength to stand structural stress and strain. ❧ In the framework of the home it prevents cracked plaster, sticking windows and doors, leaky roofs and sagging floors. ❧ Homes that have stood up in the nation's hurricanes were properly built of sturdy Pine.





## Grades of Shevlin Pine

THE five Shevlin Pines are graded according to the rules of the association covering the variety and the region of production as follows: Shevlin Northern White Pine and Shevlin Norway Pine under the rules of the Northern Pine Manufacturers' Association at Minneapolis, Minnesota; Shevlin Ponderosa Pine under the rules of the Western Pine Manufacturers' Association at Portland, Oregon; Shevlin California Sugar Pine and Shevlin California White Pine under the rules of the California White & Sugar Pine Manufacturers' Association at San Francisco.

Complete grading rule books of each association may be obtained direct, or upon request we will have copies sent to you.

Lumber is frequently regraded to conform to local grading rules but retail lumber dealers purchase under the rules of the manufacturers' association and can furnish lumber on specifications written under the associations' grades.

### *Specify Trade and Botanical Name*

In specifying give both the trade name and the botanical name of the lumber desired: Shevlin Northern White Pine (*Pinus Strobus*), Shevlin California Sugar Pine (*Pinus Lambertiana*), Shevlin Ponderosa Pine (*Pinus Ponderosa*), Shevlin California White Pine (*Pinus Ponderosa*), and Shevlin Norway Pine (*Pinus Resinosa*).

### *Selecting Grades*

Lumber is too often chosen on appearance only. Both knotted and sap grades give perfect service for their intended purposes and should be selected according to the ability to serve the use.

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Knots are in reality not defects but the natural growth of the limbs and, when sound, endure as long as the surrounding wood. Where exposure to the weather or dampness is the test, unless clear Shevlin Pine can be used, small sound-knotted Shevlin Pine will meet exacting requirements.

Lumber is often selected because it is clear, or refused because it carries knots. Knotted lumber of one species may be better than clear lumber of another for specific purposes. Low grades of Shevlin Pine may serve better than higher grades of other species. The species is often more important than the quality or grade.

### *General Grade Groups*

According to use, lumber is generally classified into three main groups—yard lumber, shop or factory lumber, and structural timber. Different grading principles apply to each class of lumber.

Yard lumber is generally any lumber intended for general construction purposes, furnishing most of the lumber used in homes. The grading is based upon the use of the entire piece.

Shop or factory lumber is lumber intended to be cut up for use in further manufacture and is used by sash, door, blind and other millwork factories. It is graded on the basis of the percentage of the area which will produce a limited number of cuttings of a given minimum size and quality. Millwork in the home is generally made from shop lumber.

The grading of structural timber is based upon the strength and the use of the entire piece.





### ❧ *Easy to Work* ❧

**C**ARPENTERS enjoy using Shevlin Pine on difficult pieces because the smooth, even texture is easy to work. It saves time and labor. ❧ Shevlin Pine can be quickly cut or sawed with or across the grain. There is no chipping or splintering and joints can be made tight. ❧ Nails feel at home in Shevlin Pine. They can be driven in at the very edge without splitting the wood. The fibre closes in, grips hard and the nails stay in place. ❧ Shevlin Pine fashions under tools with a willingness that produces accurate workmanship with sharp, pleasing lines and profiles. ❧ Once accurate, woodwork of Shevlin Pine remains accurate as this lumber "stays put," keeping the joints tight in spite of weather changes.



### *Grade Descriptions Misleading*

Grade descriptions are somewhat misleading as they indicate the maximum defects permissible, while the actual grades include all lumber between the low limit and the next higher grade.

Only a simple digest can be given here of the most used grades and kinds of Shevlin Pine for home construction. The rules of the different associations are similar but each has particular differences and each variety has certain individual defects.

The grades are here combined to give a general idea of the nature of each grade and names general permissible defects, some of which may never appear in a particular species.

### *Finish Lumber*

Finish lumber is a smooth appearing type of lumber for use in interior and exterior trim and includes only very small defects.

*B Select and Better*, known as *No. 1 and No. 2 Clear* in Shevlin California Sugar Pine and Shevlin California White Pine, gives the highest quality of interior and exterior finish. Knots, stain, pitch, checks and shake are admitted but only in the smallest degree.

*C Select* gives highly serviceable exterior and interior finish, admitting the same defects as the preceding grade but to a slightly greater degree, also medium stain covering one-third of the face.

*D Select* is used for lower quality interior finish and for cutting up purposes where fairly smooth appearing stock rather than exacting service is desired. It allows defects more numerous and serious than the preceding grades. Many pieces carry a finish appearance on one side only.

### *Beveled Siding*

Beveled Siding is graded from the face side and defects are permitted on the thin edge if they will be covered when installed.

*B and Better Siding* makes sidewalls practically free from imperfections, admitting

white sap, two or three small, sound, tight knots and other minor defects well scattered, such as light stain, slight local pitch, or small pitch pockets.

*C Siding* is a highly serviceable grade for houses of better class, admitting slightly greater number and more serious defects than preceding grade and slight shake, checks, and medium stain covering one-third of the face.

*D Siding* gives reasonable service when applied with judgment and kept well painted for moderate or low cost homes.

*E Siding* gives fair service if somewhat cut to waste and kept well painted for homes of the low price class. It admits numerous defects of more or less serious nature not admissible in the preceding grades.

Beveled Siding is usually in four or six inch widths. In the eight, ten and twelve inch widths it is generally called Colonial Siding or Bungalow Siding. Drop or Novelty Siding is also available in a number of different patterns such as Rustic, Channel Rustic, Lapped, Rough-face, Cove and German. They are Dressed and Matched or Shiplapped with one special pattern moulded edge and are made from select or common grades of Shevlin Pine as chosen.

### *Common Lumber*

Common lumber is a coarser appearing, more heavily knotted type of lumber for general framing or structural purposes such as concrete forms, lining lumber, sheathing, sub-flooring, sub-roofing and where it is to be covered with other material.

It may be rough or surfaced one, two or four sides; rabbeted on the edges to make Shiplap; tongued and grooved to make Dressed and Matched lumber; or surfaced one side and grooved near both edges on the face side to make Grooved Roofing.



*No. 1 Common* is suitable where a board with frequent medium-sized but sound and firmly set knots can be used and where exacting service is required, including highest





*The library of John H. Hauschild, Lake of the Isles Boulevard, Minneapolis. Hewitt & Brown, architects; Nels Jenson, contractor, Pine furnished by Smith & Wyman Co., all of Minneapolis*

## *Pine in the Home*


**THE** natural beauty of dignified Pine panelling gives any room an air of distinction.  Shevlin Pine has a beauty of its own for interior use. Panelling, cabinet work, built-in pieces, doors and all types of interior trim made of Shevlin Pine lends the home an attractive appearance.

quality of lining lumber, serviceable grades of Barn Siding, Grooved Roofing, Drop Siding, Interior Finish and Flooring.

It admits numerous knots, red or black, none of which are unsound, large or loose; and other defects when not in serious combination.

*No. 2 Common* is suitable where service rather than appearance is desired. It is a coarse, heavily, and not necessarily sound, knotted board making a highly serviceable lining lumber for homes of better class, a good quality of Barn Siding, medium grade Grooved Roofing and Drop Siding, and a low grade Flooring and Ceiling.

It admits more numerous and more serious defects than the preceding grade with no serious combination in any one piece.

*No. 3 Common* is suitable for lining lumber in houses of moderate cost. It admits all of the defects of lumber providing the board is suitable as a whole for its common uses.

*No. 4 Common* is for cheap lining lumber in homes of very low cost. It is characterized by red rot and large, coarse, unsound knots.

*No. 5 Common* is suitable only for the very cheapest lining lumber and for temporary work. It admits all lumber defects provided the piece is strong enough to hold together when carefully handled.

### *Dimension and Timbers*

"Dimension and timbers" is framing or structural lumber, two inches or more in thickness and four inches or more in width.

*No. 1 Dimension* is suitable for first class framing purposes where the maximum of service is required. It is of sound character, admitting defects that do not impair the strength, such as a few wormholes, some wane, sound knots, stain, heavy pitch pockets,

season checks, torn grain or occasional skips. In any case, one side and two edges should allow a good nailing surface.

*No. 2 Dimension* is suitable for reasonably serviceable framing lumber in houses of moderate cost. It admits the defects of the preceding grade in greater number and seriousness and also red, dozy streaks, crooked pieces, occasional knot holes, shake, small amount of hard rot and other defects that will not weaken or impair the piece as to render it unfit for use. A fair nailing surface is present the full length of the piece. No serious combination of defects is admissible in any one piece.

*No. 3 Dimension* is suitable only for the very lowest grade of framing lumber in very low cost homes and for temporary construction and cribbing. It admits a great deal of rot and all the imperfections of the preceding grades but in a much more pronounced form.

### *Lath*

Shevlin Pine Lath is especially recommended to avoid expansion and contraction and the consequent cracking of plaster, also to avoid stain coming through the plaster.

*No. 1 Lath* is sound and uniformly manufactured. It is free from defects which would impair its usefulness for the finest plaster work.


*No. 2 Lath* is highly satisfactory for homes built for economy and does not allow defects in combinations that will seriously affect the usefulness.

*No. 1 Mixed Lath* and *No. 2 Lath* under the rules of the Northern Pine Manufacturers' Association permits inclusion of Northern White Pine, Norway Pine, Jack Pine and Spruce. These grades are very serviceable for homes of medium or low cost.





### *Pine Homes Endure*


 HIS home, the Johnson home at Farmington, Connecticut, was built of sturdy Pine in 1690, almost a century before the nation was born. ¶ For over two hundred years the elements have battered against its walls. It is a good example of the true American Home and a convincing proof of the permanence of Pine construction. ¶ Today Shevlin Pine answers every requirement for good construction. Throughout the home, wherever wood is called for, Shevlin Pine can be used to advantage. ¶ It has the same enduring qualities as the tested building material of our ancestors. ¶ Since the nation began, Pine like this has proven itself the economical building material. It gives the most years of usefulness for each dollar expended.



## Finishing Treatments of Shevlin Pine

**S**HEVLIN Pine takes practically any finish. The pores are remarkably free from pitch and resin. The finish penetrates deeply and stays there. Paint and enamel flow smoothly on the fine texture to produce a satiny surface that stays sleek.

Shevlin Pine has a beauty of its own. It can be left natural, stained to strikingly resemble the expensive hardwoods, or enameled in any desired color.

Because of the light tone and absence of pitch or resin, Shevlin Pine takes white finish without discoloring it. The smooth surface and light tone require less paint and less labor and because of the retentive quality it does not have to be finished as frequently as most woods.

### *Natural Finish*

The natural finish is secured by applying one coat of liquid wood filler and two coats of interior varnish. This can be left in gloss, rubbed dull or polished.

A very pleasing natural finish, especially for walls panelled in Shevlin Pine, is the rubbed wax finish like the panel treatment in the old colonial homes.

### *Stain Treatment*

Oil stains are best adapted to Shevlin Pine when the desired result is Golden Oak, Weathered Oak, Dark Oak, Light Oak, Forest Green, Walnut, Antique, Light or Dark Mahogany. These finishes require the application of one coat of the stain, one coat of liquid wood filler and two coats of interior varnish. It can be left in gloss, rubbed dull, or polished.

A dull velvety finish can be obtained by

substituting one coat of flat varnish for the two coats of interior varnish. Weathered Oak effects are usually handled in this manner.

Other finishes, notably the popular silver gray, can best be accomplished by the use of acid stains. The specifications for this finish include one coat of silver gray acid stain, and one coat each of white pastefiller, shellac and flat varnish.

### *Enamel Finish*

In enamel finishing, the first coat consists of pure white lead mixed with equal parts of linseed oil and turpentine plus a small amount of dryer. This is followed by two coats of enamel undercoating and two coats of enamel, left in gloss or rubbed dull as desired. Where a dull finish is desired without the expense of rubbing, use an egg-shell varnish.

### *Exterior Treatment*

For exterior purposes, Shevlin Pine is susceptible to the same treatments, excepting of course the dull varnish and the silver gray. Natural finish is obtained by the use of one coat of floor varnish and two coats of exterior varnish. The same specifications apply to stained exteriors with the addition of a first coat of the oil stain desired.

In all treatments each coat of liquid wood filler, shellac or varnish, except the last coat, should be sandpapered when thoroughly dry with No. 0 and No. 00 sandpaper before applying the next coat.

All knots should be touched up with a thin coat of white shellac. This should be done before the treatment is begun if the finish is natural, and following the stain if hardwood effects are to be created.





### ❧ *Readily Takes Paint* ❧

**Q**UON both home interiors and exteriors, painters prefer to work on Shevlin Pine. This lumber makes their work easier and helps them to produce a pleasing appearance that remains attractive for years. ❧ The protecting film of paint, enamel or any treatment is readily absorbed by Shevlin Pine and tenaciously held. ❧ The finish flows evenly on the smooth texture in a way that appeals to the painter and brings a result that pleases the home owner.

## Shevlin Service

THE Shevlin organization was developed from the beginning to furnish quality lumber and to give efficient service. Customers speak of it as the "Friendly Service."

Its history is the history of the Pine lumber industry. Mr. Thomas H. Shevlin started his lumbering career at Albany, New York, when but fifteen years old. Moving with Pine to Michigan and then to Minnesota, he assisted in organizing the Hall & Ducey Lumber Company at Minneapolis, and in 1887 the Hall & Shevlin Lumber Company—the first to bear the Shevlin name.

In 1891 Mr. E. L. Carpenter bought an interest and the two companies became the Shevlin-Carpenter Company. Mr. Shevlin with Mr. Frank P. Hixon formed the St. Hilaire Lumber Company at St. Hilaire, Minnesota, in 1896. These two men with Mr. Hovey C. Clarke organized the Crookston Lumber Company with a mill at Crookston, Minnesota, in 1897. Five years later a mill was established at Bemidji, Minnesota, which ran until 1925.

In 1903 the Shevlin-Clarke Company, Ltd., of Ontario was formed, purchasing a large tract from the Ontario government. Various other mills were built in northern Minnesota and Canada, the latest being the mill at Blind River, Ontario, in 1927.

### *Four Mills in Operation*

Today mills are operated in four locations. The Shevlin-Clarke Company, Ltd., established the Fort Frances, Ontario, mill in 1911, with an annual capacity of 100,000,000 feet. There is sufficient Northern White Pine in this region for decades.

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The Shevlin-Hixon Company commenced operations at Bend, Oregon, in 1916. Three mills there have an annual capacity of 200,000,000 feet. Shevlin Pondosa Pine timber stands nearby are sufficient for a century with young timber growing fast. The Bend Plant is one of the largest Pine mills in the world. A battery of thirty-two dry kilns with a monthly capacity of six million feet assures the perfect condition of Shevlin Pondosa Pine. The situation of the yard and the excellent climate also make air drying of the lumber unusually satisfactory at this location.

The McCloud River Lumber Company at McCloud, California, one of the largest plants producing California White and Sugar Pine, became a part of the Shevlin organization in 1921. The annual capacity is 200,000,000 feet. The battery of fifty-two dry kilns, said to be the largest in the world, have a daily output of 300,000 feet. Here, too, the climate and the yard location produce excellent results with air drying of lumber.

### *New Mill at Blind River*

A virgin stand of Northern White Pine, considered the largest on the continent, was purchased in 1926 near Blind River, Ontario. This operation of the Carpenter-Hixon Company, Ltd., has an annual capacity of 100,000,000 feet and will furnish genuine White Pine for generations.

In 1887 the annual capacity of the Shevlin interests was 60,000,000 feet. In 1927, after forty years of specialization in Pine, this has increased to over 500,000,000 feet. The Shevlin organizations have grown with the building needs for quality Pine.



## *Modern Lumbering and Milling Methods*

The Shevlin interests were among the pioneers in logging Pine with machinery. In the early days all the logging was done in the winter, the logs being hauled over the snow by horses to the streams to await the famous spring drive. Then the logs went rushing down the swollen streams to the mill.

Under present methods there is little driving. It is a day of steam methods. Tractors instead of horses haul the logs out to the clearing. Railroads carry the logs to the mill. A great deal of the logging is done during the summer with steam skidders, donkey engines and tractors.

Another lumbering stage, known as high lead skidding, is proceeding rapidly in the west. The logs are moved suspended from carriers running on fixed cables. Aerial logging is coming to the front and the lumberjacks are becoming birdmen.

In the milling processes also, the Shevlin interests have been leaders in adopting modern methods of machine production to insure the highest quality finished product. Uni-

formly accurate and smooth milling is a natural result of Shevlin methods.

Rigid grading is carried on by graders carefully trained with years of experience. A check grader constantly checks over their work to see that the grades and sizes are kept uniform.

## *Shevlin Service*

Among those who know the work of the Shevlin traffic department, it is recognized that shipments will arrive when promised if it is humanly possible. Especially do dealers appreciate the effort of this department to furnish Shevlin Pine when it is wanted.

The main administrative and sales offices of the Shevlin, Carpenter & Clarke Company are located at Minneapolis, Minnesota. Branch sales offices are maintained at Chicago, New York and San Francisco with sales representatives and connections in practically every state, men who know lumber and who are anxious to co-operate with architects, contractors and dealers in every way to help build real American homes of sturdy Pine.

This is why we suggest that you "Specify Shevlin Pine."

